Amendment To The Specification

Please amend the specification as follows:

[0017] Wireless network devices are available that allow portable computers to access a network using wireless protocols such as ~~Bluetooth~~ BLUETOOTH TM. Additional systems that comply ~~compliant~~ with hardware layer protocols such as the versions of the IEEE 802.11 wireless systems standards are available as are ~~well as~~ systems that are also ~~such as~~ Wi-Fi compliant ~~systems~~. Typical wired network interface cards (NIC) utilize the Ethernet protocol in which each individual Ethernet card produced is assigned a unique address. An address issuing authority ensures that the individual addresses assigned to the various Ethernet card manufacturers are unique.

[0019] Systems employing protocols such as ~~Bluetooth~~ BLUETOOTH TM and 802.11b are generally wireless systems operating in the RF bands. Wired networks generally must be physically tapped for eavesdropping., ~~but~~ However, an appropriate receiver, such as one located in a parking lot, may ~~typically~~ intercept wireless systems communications.

[0025] The Global Positioning System (GPS) ~~is~~ includes a system of satellites positioned in earth orbit ~~above the earth~~ that transmit microwave signals to ~~that allow~~ GPS receivers ~~to~~ that receive the signals ~~of~~ from one or more of the satellites. The receiver uses GPS signal information ~~about and in the signal~~ to determine the absolute position of the receiver in latitude and longitude, usually to within several feet accuracy. The system may also be utilized to determine other parameters including the speed of the receiver and the altitude of the receiver. However, GPS signals travel a great distance and are very weak when received on Earth. For example, receivers often cannot utilize GPS signals indoors because of the further attenuation of the signals ~~in~~ due to interference from the structure of buildings.

Additionally, multi-path reflection errors often degrade the location determination performance of a receiver in a city environment. GPS repeaters may be utilized to boost signals into an indoor environment, but such system may not provide precise location data. In automotive applications, other data sources such a compass and gyroscope may be used to provide additional data.

[0029] In one embodiment, a system and method for providing discriminating user interface access to a business machine is shown for reconfigurable external user interfaces in an environment having several business machines. A handheld computer with wireless access uses Java to reconfigure the handheld as a user interface for different types of business machines and different units of the same type in a crowded mailroom. The mailroom is ~~equiped~~ equipped with a centimeter accuracy wireless positioning system. The floor of the mailroom is organized in a grid and each business machine is assigned a portion of the grid. When a handheld is in the machine control grid, it controls the machine. The business machine can update the handheld user interface. There is also a conflict resolution system to ensure ~~so~~ that people passing by the machine control active box for a business machine ~~active box does~~ do not ~~intefere~~ interfere with the current user.

[0033] In this embodiment, the external processor 40 includes a receiver that determines position information such as x-y coordinates in a relative or absolute mapped grid in a mailroom. The mailroom has a grid in which machines 50, 52 have ~~defined on the mapped grid~~ control areas 32, 34 respectively defined on the mapped grid. Machine 50 has communications connections to the server 20, machine 52 and handheld 40 across a ~~Bluetooth~~ BLUETOOTH TM network using connections 24, 29 and 28 respectively. Similarly, machine 52 has ~~Bluetooth~~ BLUETOOTH TM connections 29, 27 and 32. Handheld 40 connects to machines 50, 52 using ~~Bluetooth~~ BLUETOOTH connections 28, 27 respectively, and to server 20 using connection 26.

[0034] In this embodiment, the handheld sends position information to the server 20. The server stores data ~~for~~ defining the control areas 32, 34 on the grid and determines when a handheld 40 is in a particular control grid. As shown, Handheld 40 is in grid 32 and will control machine 50. Here, server 20 has a ~~Bluetooth~~ BLUETOOTH TM gateway for access to other third party servers. The server 20 then provides a shared secret such as the ~~Bluetooth~~ BLUETOOTH TM passkey to the machine 50 and handheld 40 so that they can pair. Here, the handheld 40 is a master and the machines are the slaves in the machine control connection., ~~and the~~ The handheld 40 is the master and server 20 the slave in the position information and key transfer connections. Bonding could be utilized as well.

[0035] After the passkey is transferred, the handheld 40 and machine 50 pair and then machine 50 transfers control to the handheld 40 until a timeout, explicit relinquishment of control, or positional relinquishment of control ~~by leaving~~ which occurs when handheld 40 leaves the control area. Additionally, the machine may be instructed to remove machine 50 from control by a priority processor such as server 20 that prioritizes the handheld connections.

[0036] Alternatively, the handheld 40 could dock with the server for key information for all the machines 50, 52. ~~and then~~ Then the ~~machine~~ machines 50, 52 could allow user interface access based upon position data.

[0037] Alternatively, a system such as 802.11b can operate in a peer-to-peer mode. ~~, but it~~ However, because such a system is not an ad-hoc network, ~~and~~ the server must manage the connections. In the preferred embodiment, ~~Bluetooth~~ BLUETOOTH TM systems provide an ad-hoc network with little user setup.

[0043] The transducers utilize ultrasonic and RF technology using known techniques. Various levels of grids may be defined. Here, a room grid 201 encompasses the entire room area. Area 220 encloses the copier control area and is for a group of identical or similar machines. Each copier 282, 284, 286, 287, 288 and 289 has associated a defined control grid 222, 224, 226, 227, 228, and 229 respectively. Here, facsimiles 250, 254 each have control grids 252, 256 respectively. Here, printers 240, 244 each have control grids 242, 246 respectively. It is to be understood that many different configurations of machines may be utilized. Users 260, 262, 264 and 266 each have handheld external processors (not shown) that may be used for external user interface purposes for one or more of the machines among other ~~ruses~~ uses. Server 270 is connected to the machines and the user external processors (not shown) using an ad-hoc ~~Bluetooth~~ BLUETOOTH TM network. Alternatively, an 802.11 peer-to-peer network may be configured and utilized. Here, the server is reporting handheld position to the machines and informing the machines which handheld to provide access to. The server may instruct the machine, which handheld to provide access to using a 48 bit unique MAC addresses, or a piconet address. Here, the server may instruct that user 262 have priority over 264 due to his position in the control grid.

[0061] File Selection and ~~Manipulatioon~~ Manipulation